# Alacritech® Accelerator
# Users Guide
# for Scalable Networking Pack

# Preface

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This document describes Accelerators from Alacritech, Inc. This document is the official reference source for all revisions/releases of these products until rescinded by an update.

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Part Number: 900156 Rev 2 5/06

## Organization of This Guide

This guide is the primary reference and operation guide for Alacritech Accelerators and contains the following sections:

**Chapter 1 - Introduction** provides a general introduction to Alacritech Accelerators and the SLIC Technology on which they are based.

**Chapter 2 - Software Installation** includes the procedures required to install the software component and configure the operating system for correct operation.

**Chapter 3 – Device Management** provides the procedures for configuring, monitoring and maintaining Accelerator performance and procedures for special circumstances.

**Chapter 4 – Troubleshooting and Support** provides a list of possible problems and their solutions.

**Appendix A - Network Software License Agreement and Warranty** provides the text of the License Agreement to use the software component and the Limited Media Warranty for the software media.



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# 1 Introduction

## 1.1 About this Guide

This guide describes how to install Release 9 software and operate Alacritech Accelerators on a Windows Server 2003-based system or a Windows XP Professional x64 Edition-based system that uses the Microsoft Windows Server 2003 Scalable Networking Pack. 1000 Series (1000x1, SES1001) Accelerators are not supported with this software release, but will continue to be supported under earlier software releases with a major number of 7. 100 Series (100x4, 100x2 and 100x1) Accelerators are not supported with this software release, but will continue to be supported under earlier releases with a major number of 6.

### 1.1.1 Naming conventions

The general term **Accelerator** for this release applies to all of the following products:

TCP/IP Offload Engine (TOE) NICs (TNICs):

- SEN2002XT Dual-Port Accelerator
- SEN2002XF Dual-Port Accelerator (1000Base-SX)
- SEN2001XT Single-Port Accelerator
- SEN2001XF Single-Port Accelerator (1000Base-SX)
- SEN2104ET Quad-Port Accelerator
- SEN2104EF Quad-Port Accelerator (1000Base-SX)
- SEN2102ET Dual-Port Accelerator



- SEN2102EF Dual-Port Accelerator (1000Base-SX)

iSCSI Controllers:

- SES2002XT Dual-Port iSCSI Accelerator
- SES2002XF Dual-Port iSCSI Accelerator (1000Base-SX)
- SES2001XT Single-Port iSCSI Accelerator
- SES2001XF Single-Port iSCSI Accelerator (1000Base-SX)
- SES2104ET Quad-Port iSCSI Accelerator
- SES2104EF Quad-Port iSCSI Accelerator (1000Base-SX)
- SES2102ET Dual-Port iSCSI Accelerator
- SES2102EF Dual-Port iSCSI Accelerator (1000Base-SX)

Product names ending with a T specify unshielded twisted pair (UTP) copper connections, and product names ending with an F indicate fiber-based connections. XT and XF products are PCI-X based, and ET and EF products are PCI Express (PCIe) based.

## 1.2 Description

Alacritech Accelerators are single-port or multi-port network interface cards (NICs) that employ Alacritech's SLIC Technology® architecture, which uses an innovative application-specific integrated circuit (ASIC) for protocol processing. Accelerators operate with Windows Server 2003 or Windows XP Professional x64 Edition operating systems using the Scalable Networking Pack.

The SLIC Technology architecture increases server performance and efficiency in two specific ways:

- TCP/IP Protocol processing is offloaded onto the Accelerator, freeing the CPU for application processing and maximizing throughput.

- A unique ASIC utilizes an Internet Protocol Processor (IPP), optimized for TCP/IP protocol processing, which delivers faster performance than general purpose CPUs.

SLIC Technology eliminates the burden of TCP/IP protocol processing on the host CPU. By offloading protocol processing, SLIC Technology frees the CPU for application processing, boosting both network and server performance.

# 2 Software Installation

## 2.1 Software Installation Overview

This chapter covers the installation of the software required for an Accelerator under Windows Server 2003 or Windows XP Professional x64 Edition. There are different procedures for different types of installations. Carefully follow the correct procedure. The following types of situations are covered:

- Installing the drivers into a system with the Windows operating system
- Updating the drivers for an existing Accelerator installation
- Uninstalling the Accelerator

**Note: TCP Chimney offload will not work with the following features:**

**•Windows Firewall (Windows XP enabled by Default)**

**•Internet Protocol security (IPsec)**

**•Internet Protocol Network Address Translation (IPNAT)**

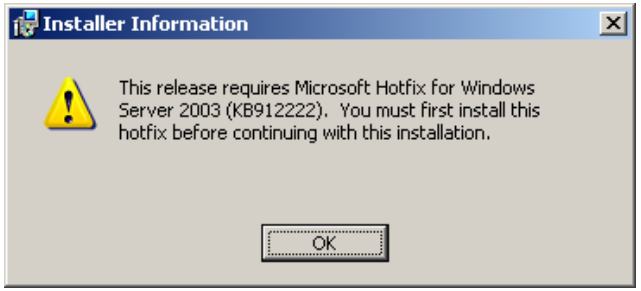
**•Third-party firewalls**

**•NDIS 5.1 intermediate drivers**

**If any one of these features is turned on, TCP Chimney offload will not work regardless of the registry settings. See Chapter 3 for instructions on disabling these features.**



**Note: The Microsoft Scalable Networking Pack must be installed prior to installing Alacritech software. If Scalable Networking Pack is not installed, you will get the following popup and be unable to complete the installation.**


Installer Information
This release requires Microsoft Hotfix for Windows Server 2003 (KB912222). You must first install this hotfix before continuing with this installation.
OK

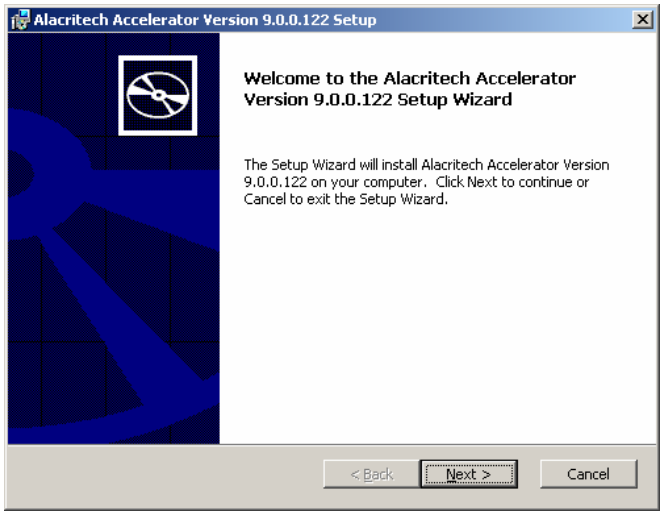
## 2.2 Software First Installation

This section covers the procedures for installing the software required for the Accelerators prior to installing Alacritech hardware. Follow the appropriate procedure for your type of installation.

### 2.2.1 Installation of the Accelerator

1. Insert your **Alacritech Driver Installation CD** into the system. Select the appropriate installation. If the installation is launched from the HTML page on the CD, and default security settings are set on the browser, there may be several pop-ups asking if you want to run this package. Once you select run, the setup wizard will

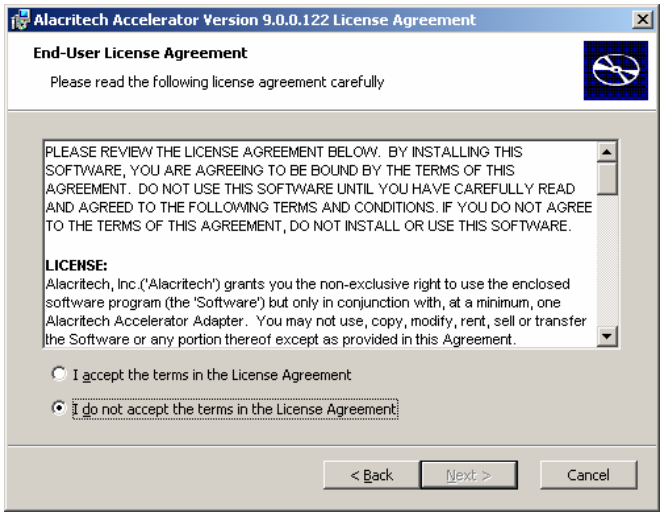
launch.


Alacritech Accelerator Version 9.0.0.122 Setup
Welcome to the Alacritech Accelerator Version 9.0.0.122 Setup Wizard
The Setup Wizard will install Alacritech Accelerator Version 9.0.0.122 on your computer. Click Next to continue or Cancel to exit the Setup Wizard.
< Back
Next >
Cancel

2. From the **Alacritech Accelerator Setup** click **Next** to begin the software installation.

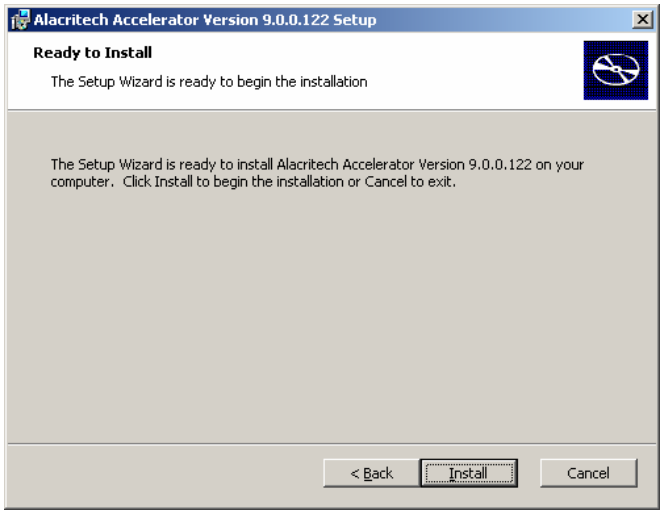
3. In the **Alacritech Accelerator Setup – Software License Agreement** window read the terms of the End User License Agreement. Select **I accept the terms of the License Agreement**, and click the **Next** button if you accept the license agreement.



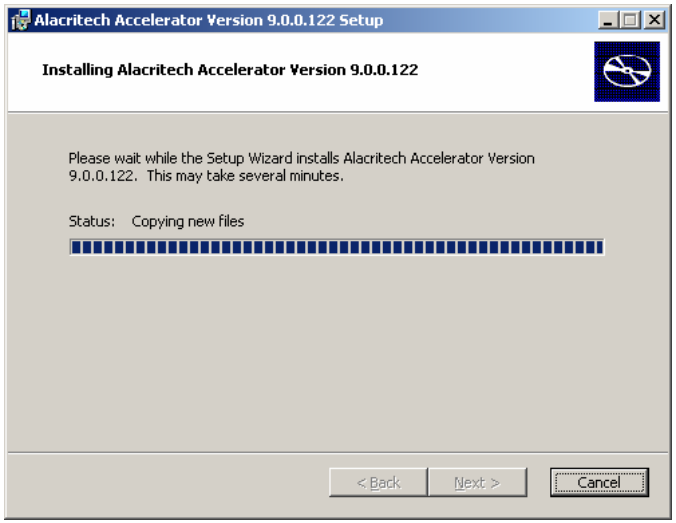

Alacritech Accelerator Version 9.0.0.122 License Agreement
End-User License Agreement
Please read the following license agreement carefully
PLEASE REVIEW THE LICENSE AGREEMENT BELOW. BY INSTALLING THIS SOFTWARE, YOU ARE AGREEING TO BE BOUND BY THE TERMS OF THIS AGREEMENT. DO NOT USE THIS SOFTWARE UNTIL YOU HAVE CAREFULLY READ AND AGREED TO THE FOLLOWING TERMS AND CONDITIONS. IF YOU DO NOT AGREE TO THE TERMS OF THIS AGREEMENT, DO NOT INSTALL OR USE THIS SOFTWARE.
LICENSE:
Alacritech, Inc.('Alacritech') grants you the non-exclusive right to use the enclosed software program (the 'Software') but only in conjunction with, at a minimum, one Alacritech Accelerator Adapter. You may not use, copy, modify, rent, sell or transfer the Software or any portion thereof except as provided in this Agreement.
I accept the terms in the License Agreement
I do not accept the terms in the License Agreement
< Back
Next >
Cancel

If you do not accept the terms of the License Agreement then leave **I do not accept the terms in the License Agreement** selected and click Cancel to exit the installation.

4. If you accept the license agreement, the **Alacritech Accelerator Setup** window will appear:

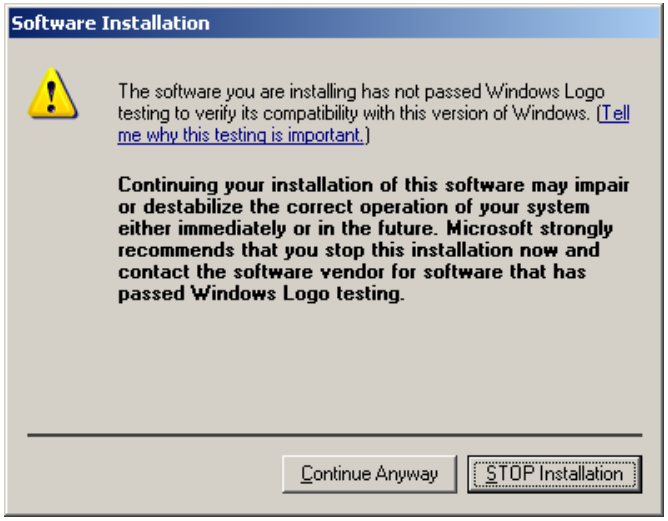

Alacritech Accelerator Version 9.0.0.122 Setup
Ready to Install
The Setup Wizard is ready to begin the installation
The Setup Wizard is ready to install Alacritech Accelerator Version 9.0.0.122 on your computer. Click Install to begin the installation or Cancel to exit.
< Back
Install
Cancel

Click the **Install** button to install the software.

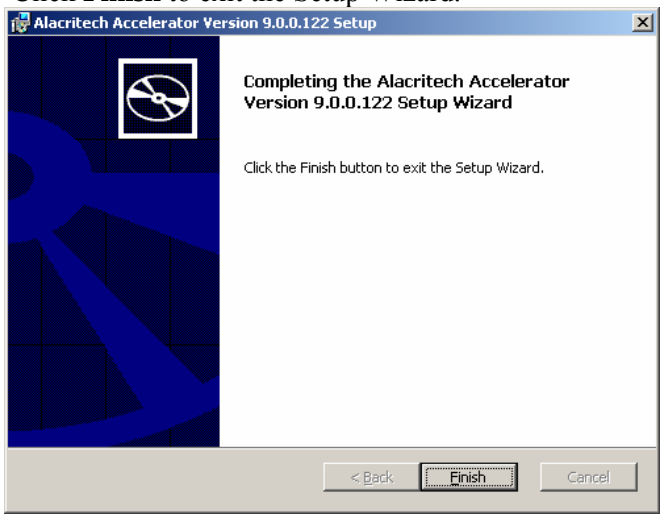

Alacritech Accelerator Version 9.0.0.122 Setup
Installing Alacritech Accelerator Version 9.0.0.122
Please wait while the Setup Wizard installs Alacritech Accelerator Version 9.0.0.122. This may take several minutes.
Status: Copying new files
< Back
Next >
Cancel

5. A dialog box titled **Software Installation** may appear. This should only occur when using drivers that are not certified through the Microsoft Designed for Windows Logo process. Most official drivers released by Alacritech have appropriate digital signatures, while others, including beta drivers, do not. A missing digital signature does not prevent the Alacritech drivers from working properly on your system.

   Click the button titled **Continue Anyway** to install the driver without a digital signature. This dialog box will appear each time the driver is installed for an adapter port. Be sure to click the **Continue Anyway** button each time:


Software Installation
The software you are installing has not passed Windows Logo testing to verify its compatibility with this version of Windows. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the software vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

6. Click **Finish** to exit the Setup Wizard.


Alacritech Accelerator Version 9.0.0.122 Setup
Completing the Alacritech Accelerator Version 9.0.0.122 Setup Wizard
Click the Finish button to exit the Setup Wizard.
< Back
Finish
Cancel

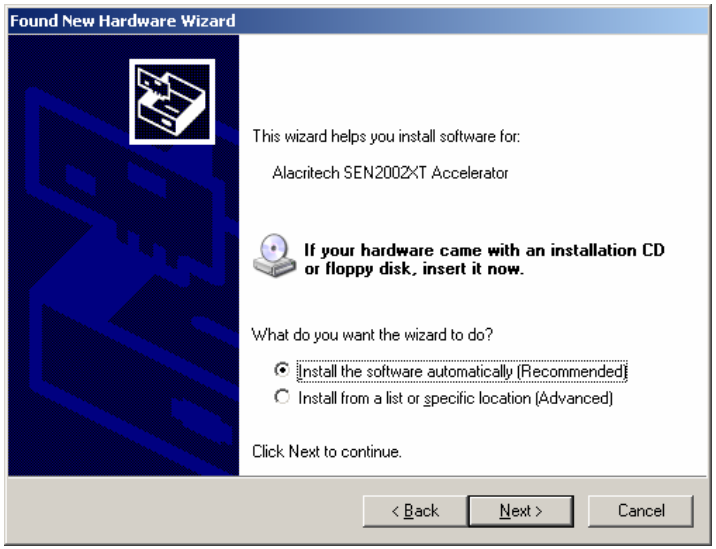
7. The software setup is now complete. Follow the steps in the Alacritech Hardware Installation Manual to install your Accelerator.

8. Once the hardware has been installed, start the system. On start up the Microsoft Found New Hardware Wizard will be launched. When the Found New Hardware Wizard is launched, decide whether you want to connect to Windows Update or install drivers that shipped with the product. Select an option and Click **Next** to continue

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission).
Online privacy information
Can Windows connect to Windows Update to search for software?
Yes, this time only
Yes, now and every time I connect a device
No, not this time
Click Next to continue.
< Back
Next >
Cancel

9. Selecting **No, not this time** will prompt the Found New Hardware Wizard to locate the drivers. Since the drivers were installed in a previous step select **Install the software automatically**.

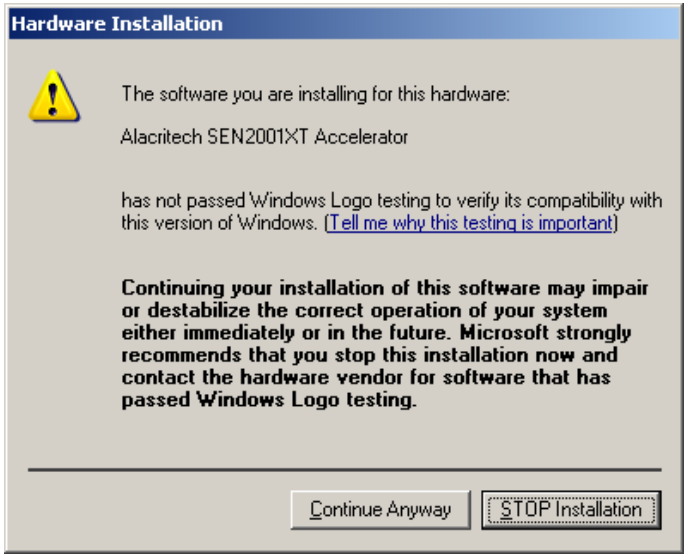



Found New Hardware Wizard
This wizard helps you install software for:
Alacritech SEN2002XT Accelerator
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

10. A dialog box titled **Hardware Installation** may appear. This should only occur when using drivers that are not certified through the Microsoft Designed for Windows Logo process. Most official drivers released by Alacritech have appropriate digital signatures, while others, including beta drivers, do not. A missing digital signature does not prevent the Alacritech drivers from working properly on your system.

    Click the button titled **Continue Anyway** to install the driver without a digital signature. This dialog box will appear each time the driver is installed for an adapter port. Be sure to click the **Continue Anyway** button

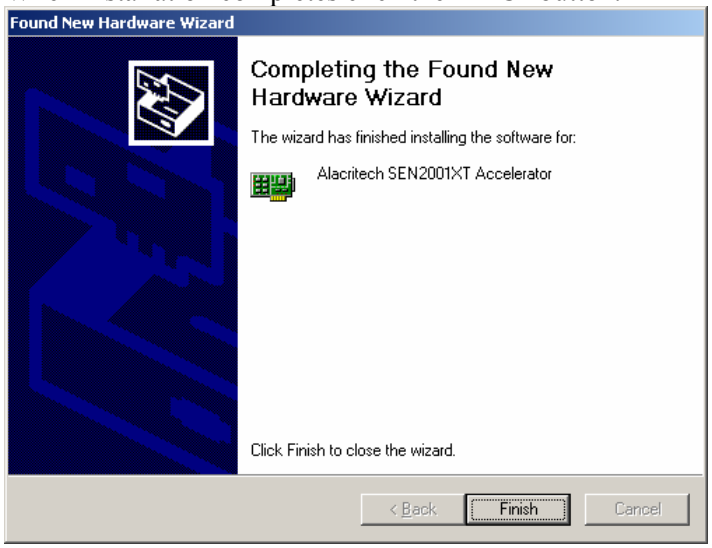
each time:


Hardware Installation
The software you are installing for this hardware:
Alacritech SEN2001XT Accelerator
has not passed Windows Logo testing to verify its compatibility with this version of Windows. (Tell me why this testing is important)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

11. You may have to repeat steps 11-13 when installing multiport cards or multiple cards.



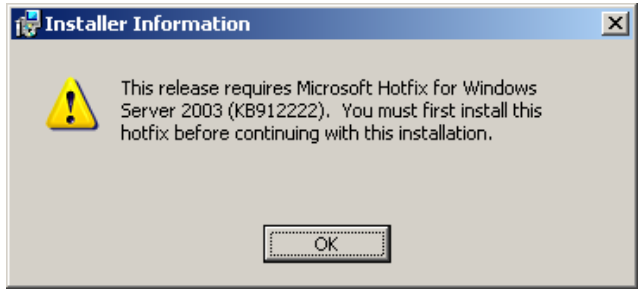
12. When installation completes click the **Finish** button.




13. Your Alacritech Accelerator is now installed.

## 2.3 Hardware First Installation

**Note: The Microsoft Scalable Networking Pack must be installed prior to installing Alacritech software. If Scalable Networking Pack is not installed, you will get the following popup and be unable to complete the installation.**


Installer Information
This release requires Microsoft Hotfix for Windows Server 2003 (KB912222). You must first install this hotfix before continuing with this installation.
OK

1. Install the Alacritech Accelerator using the procedure in the Alacritech Hardware Installation Guide.

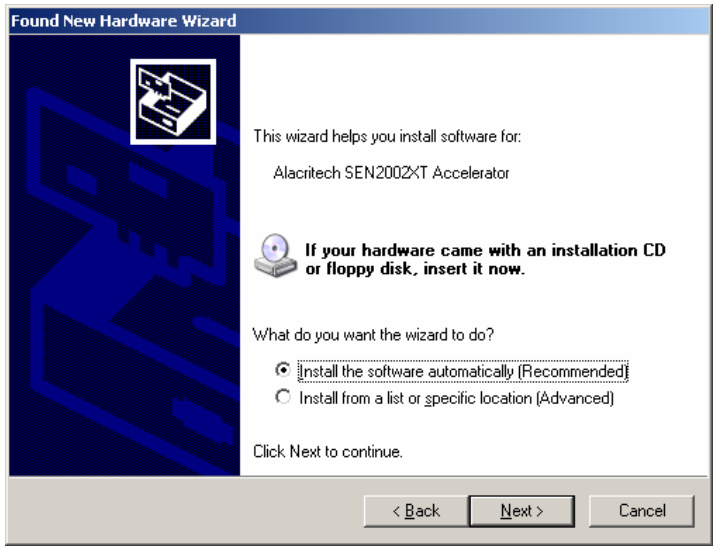
2. Once the hardware has been installed, start the system. On start up the Microsoft Found New Hardware Wizard will be launched. When the Found New Hardware Wizard is launched, decide whether you want to connect to Windows Update or install drivers that shipped with the product. Select an option and Click **Next** to continue Insert your **Alacritech Driver Installation CD** into the system. Select the appropriate installation. If the installation is launched from the HTML page on the CD, and default security settings are set on the browser, there may be several pop-ups asking if you want to run this package. Once you select run, the setup wizard will launch.

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission).
Online privacy information
Can Windows connect to Windows Update to search for software?
Yes, this time only
Yes, now and every time I connect a device
No, not this time
Click Next to continue.
< Back
Next >
Cancel

3. Selecting **No, not this time** will prompt the Found New Hardware Wizard to locate the drivers. Since the drivers were installed in a previous step select **Install from a list or specific location**. Drivers are located in one of the following directories on the CD:

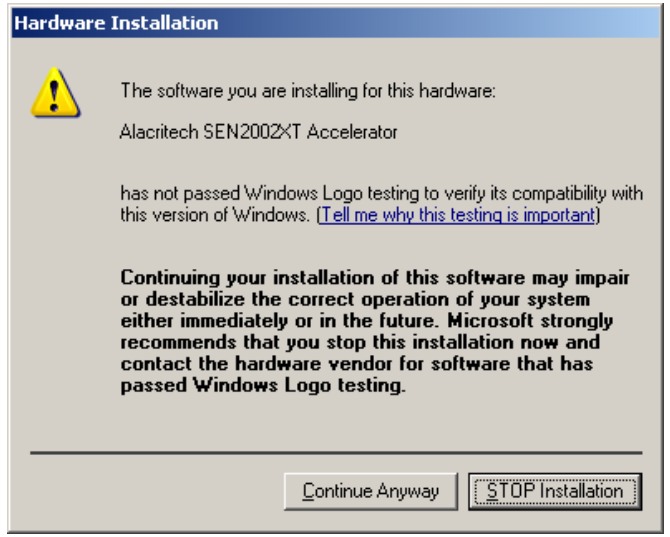
   a. \snp\x86 (32-bit drivers)

   b. \snp\amd64 (64-bit drivers)

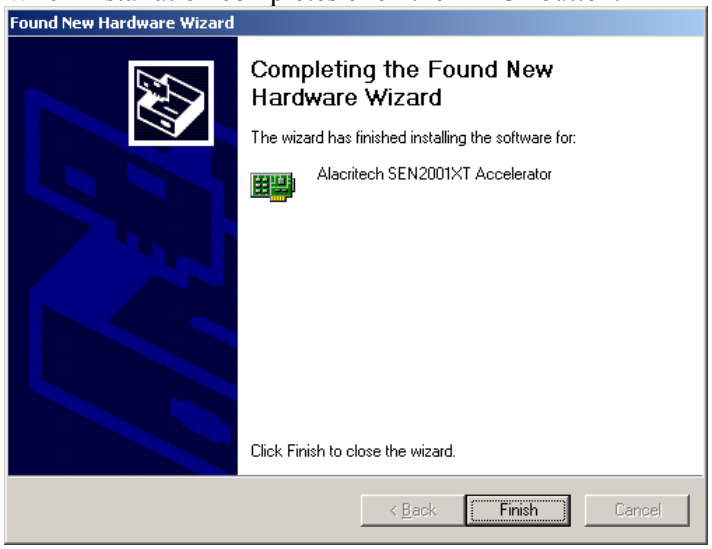

Found New Hardware Wizard
This wizard helps you install software for:
Alacritech SEN2002XT Accelerator
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

4. A dialog box titled **Hardware Installation** may appear. This should only occur when using drivers that are not certified through the Microsoft Designed for Windows Logo process. Most official drivers released by Alacritech have appropriate digital signatures, while others, including beta drivers, do not. A missing digital signature does not prevent the Alacritech drivers from working properly on your system.

   Click the button titled **Continue Anyway** to install the driver without a digital signature. This dialog box will appear each time the driver is installed for an adapter port. Be sure to click the **Continue Anyway** button each time:


Hardware Installation
The software you are installing for this hardware:
Alacritech SEN2002XT Accelerator
has not passed Windows Logo testing to verify its compatibility with this version of Windows. (Tell me why this testing is important)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

5. When installation completes click the **Finish** button.




6. Your Alacritech Accelerator is now installed.

## 2.4 Uninstalling the Accelerator

### 2.4.1 Removal of an Accelerator

1. The Windows operating system will disable the driver software automatically. If you subsequently install a card after removal, the Found New Hardware wizard will install the driver. With Release 9 and later, it is not necessary to uninstall the Alacritech Accelerator with the Hardware Manager prior to moving/removing the card.
2. Shut down the computer, and unplug the power cable. Failure to do so may endanger you, and may damage the adapter or computer.

**Note: Alacritech Accelerators use components that are sensitive to ESD. Proper ESD handling and storage should be followed.**

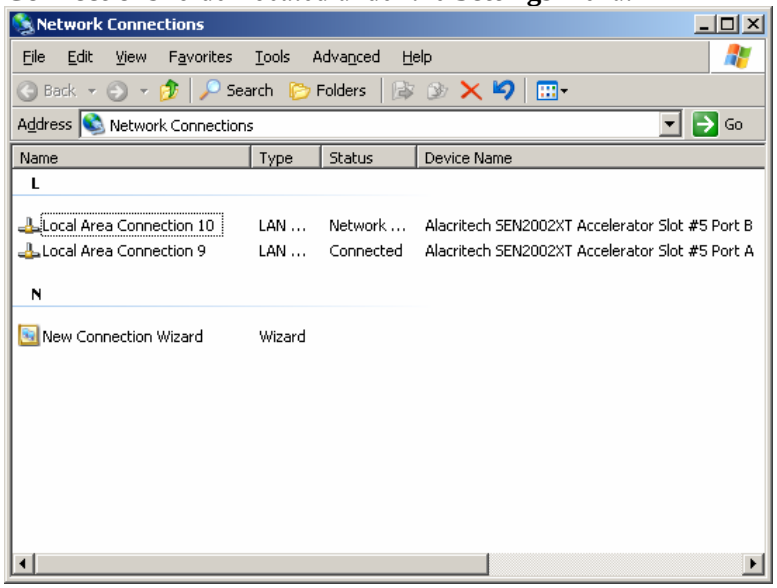
3. Remove the computer cover, and remove the Alacritech Accelerator.

# 3 Device Management

## 3.1 Starting Device Management

Alacritech Accelerators are managed using the Windows Device Manager. To start Device Manager, use the following procedure

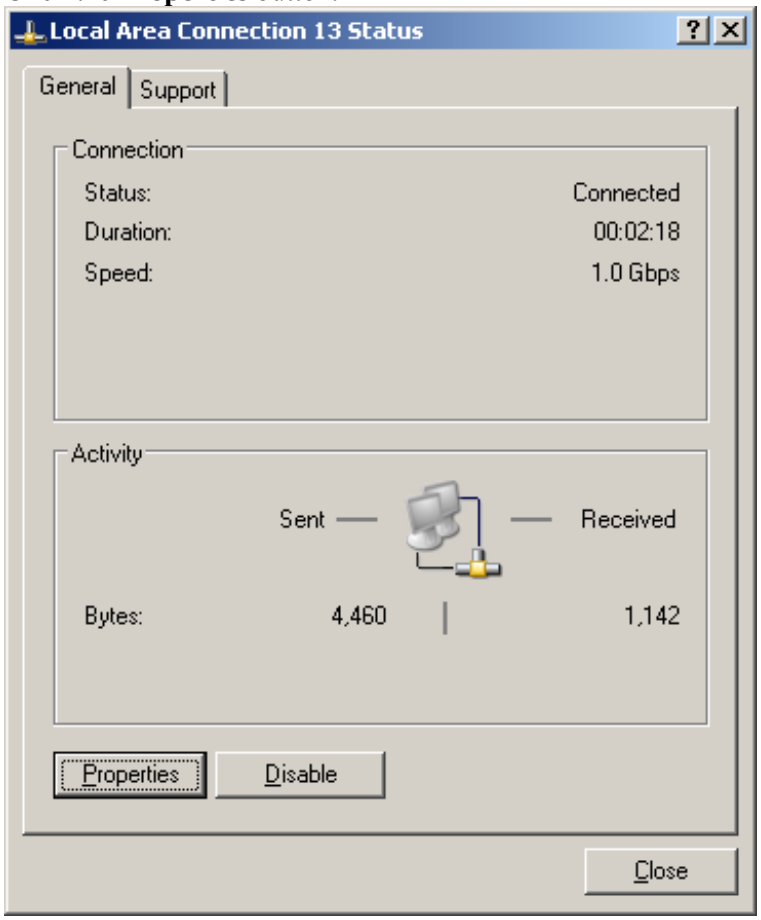
1. From the **Start** menu, open the **Network & Dial-up Connections** folder located under the **Settings** menu.


Network Connections
File Edit View Favorites Tools Advanced Help
Back Search Folders
Address Network Connections
Go
Name Type Status Device Name
L
Local Area Connection 10 LAN ... Network ... Alacritech SEN2002XT Accelerator Slot #5 Port B
Local Area Connection 9 LAN ... Connected Alacritech SEN2002XT Accelerator Slot #5 Port A
N
New Connection Wizard Wizard

2. Double-click the LAN connection of the interface you wish to manage.

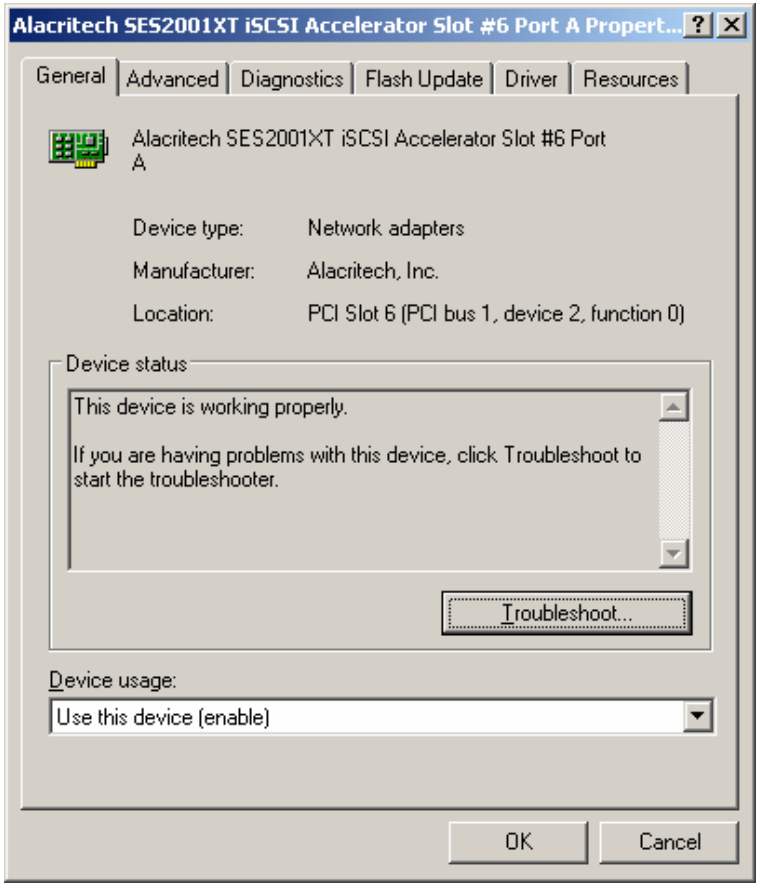


3. Click the **Properties** button.




4. Click on the **Configure** button under the **General** tab. This will open the Properties box which will allow you to manage the

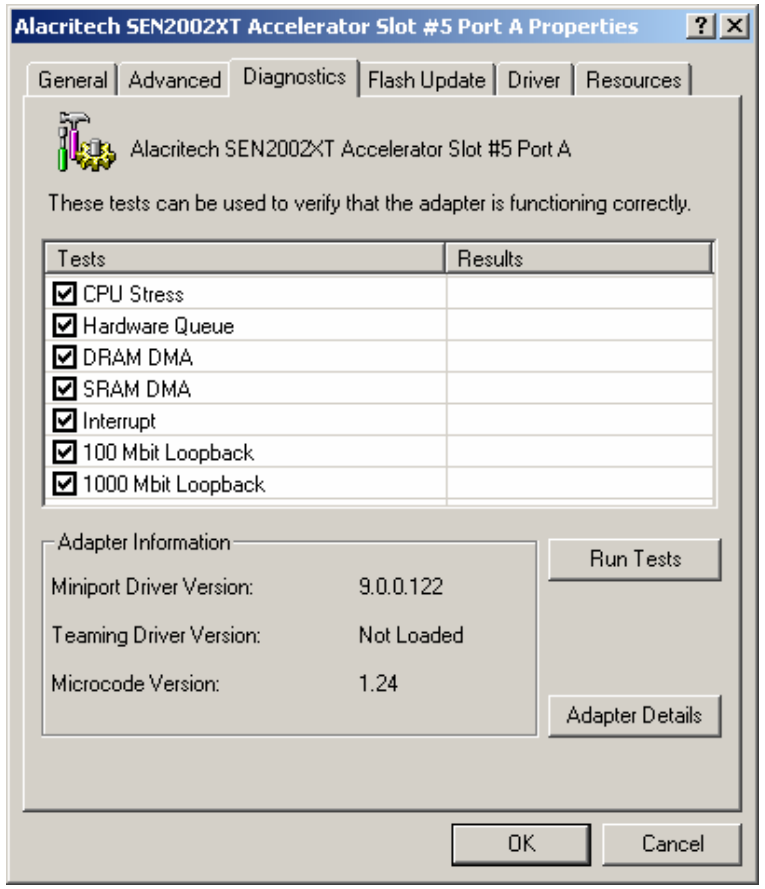
device.




## 3.2 Running Adapter Diagnostics

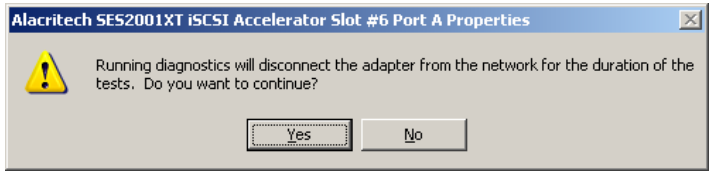
Diagnostics can be run on any Accelerator using the following procedure:

1. Start Device Manager, and select the Diagnostics Tab. The SLIC Adapters window will appear:

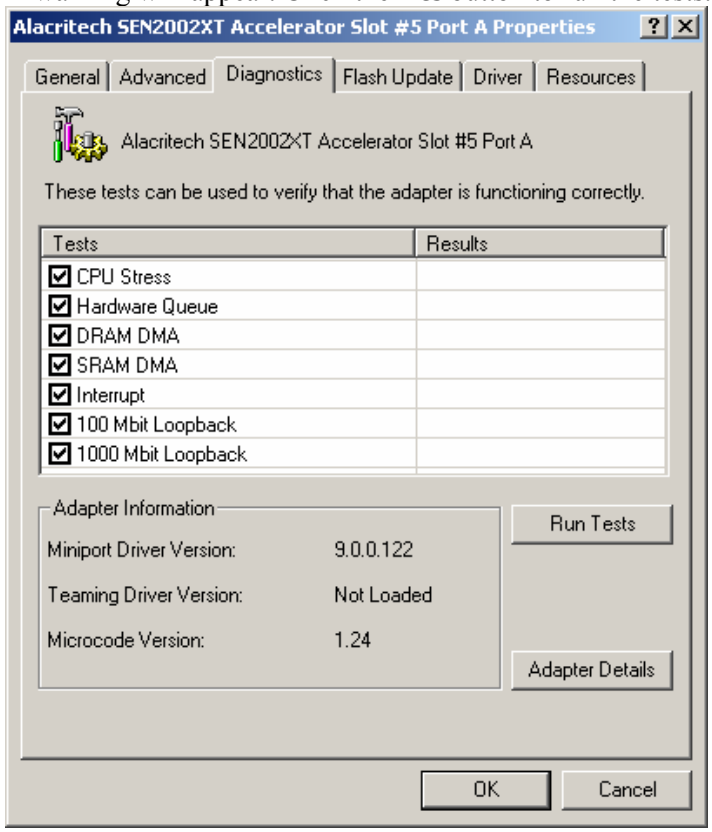



**Note: Running Diagnostics will disrupt the port of the Accelerator under test.**

2. Click the **Run Tests** button.


Alacritech SES2001XT iSCSI Accelerator Slot #6 Port A Properties
Running diagnostics will disconnect the adapter from the network for the duration of the tests. Do you want to continue?
Yes
No

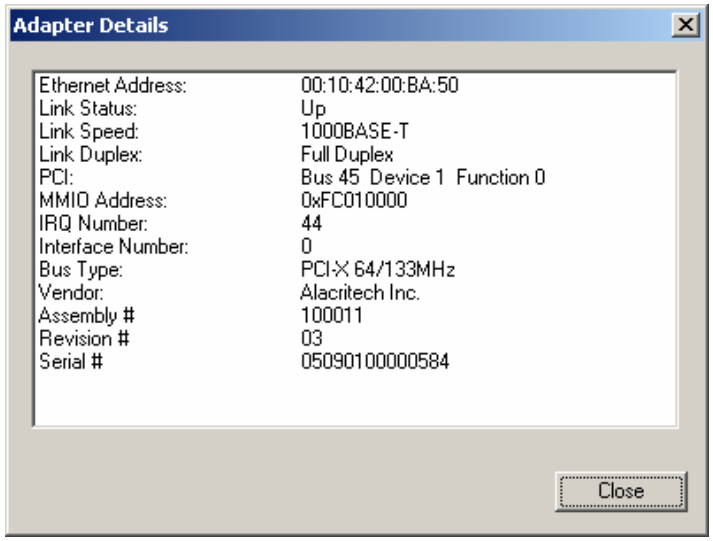
3. A warning will appear. Click the **Yes** button to run the tests.




4. The adapter will then run through self-test of the IPP and the selected Accelerator. A properly functioning board will display **Passed** for all results.

5. If you wish to obtain more information on the adapter, click the **Adapter Details** button.






6. Click the **Close** button to exit Adapter Details.

7. Click the **OK** button to exit the application.

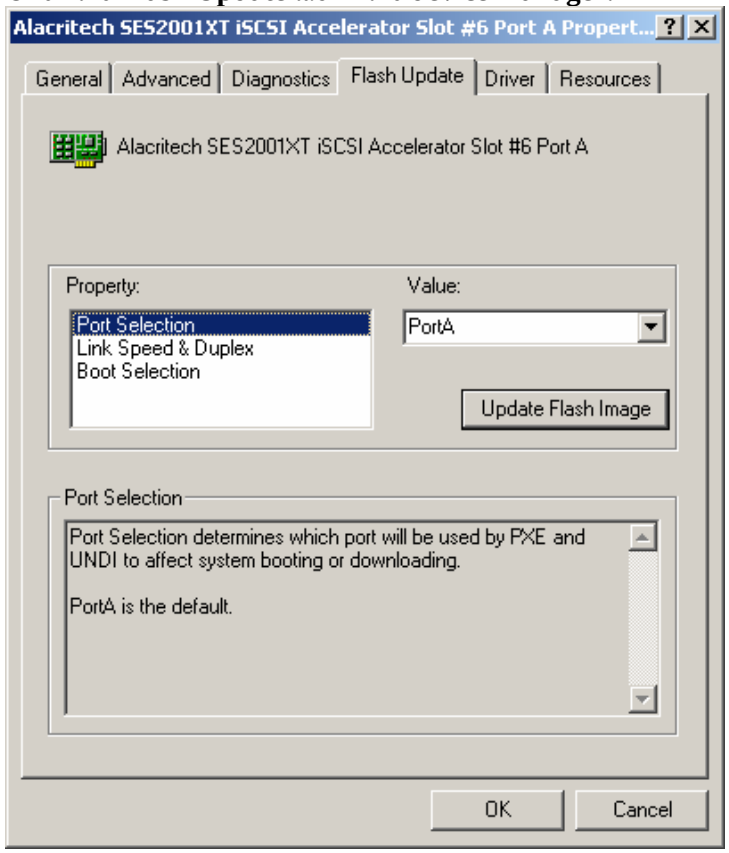
## 3.3 Updating Flash Code

The mechanism for flashing code on flash-capable Accelerators is provided through device manager. The PXE/UNDI drivers for Alacritech Accelerators allow PXE and iSCSI software boot solutions to work. Note that these drivers do not include a BIOS-level iSCSI boot driver, and that a third-party iSCSI boot software package is needed for complete iSCSI boot support.

The latest PXE drivers are available from Alacritech's web site in the Support section.

To install the latest flash code on an Accelerator, follow these steps:

1. Click the **Flash Update** tab in the **device manager**.




2. Set the Port Selection, Link Speed, and Boot Selection options, then click the **Update Flash Image** button.
3. Specify the flash image directory by either entering the appropriate path to the flash files in the **Flash Image Directory** text box or by browsing to the appropriate path by clicking the **Browse** button. By default, the Alacritech PXE/UNDI binary image files are located in the **Flashimage** folder of the driver distribution media.
4. Once the path is specified, click the **Update Flash** button to complete the flash process. NOTE: The Accelerator will not be operational during the flash update process and will disrupt all ports of the Accelerator being flashed in the server.
5. After flashing the latest PXE drivers, click the **OK** button to exit the application.



## 3.4 Disabling Windows Firewall to Enable TCP Offload

In Windows XP Professional it is necessary to disable Windows Firewall/Internet Connection Sharing to activate the TCP Offload feature on the Accelerators in your system.

**Note: By default with Windows XP Professional, the Windows Firewall feature is turned on. Therefore, TCP Chimney will not function in such a scenario.**

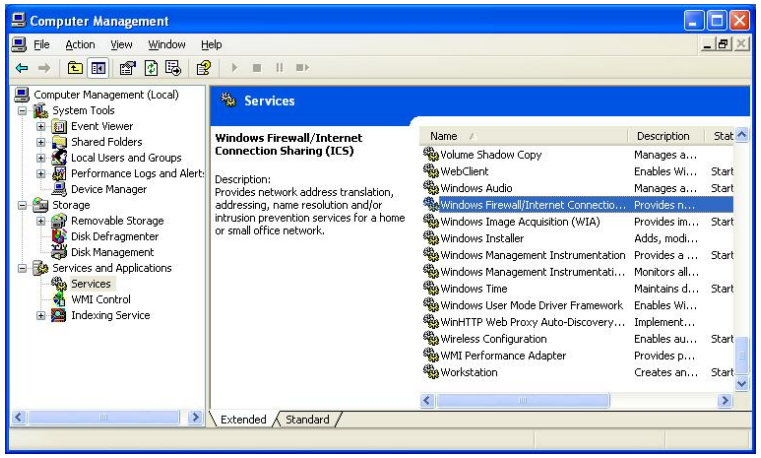
**The Windows Firewall must be explicitly turned off before TCP Chimney can function.**

**Note: By default, the IP NAT and IPsec Policy Agent features are turned on when certain components such as bridging and routing services are enabled. Therefore, TCP Chimney will not function in such a scenario. When the bridging and routing services are disabled, IPNAT is not turned off. Therefore, TCP Chimney is not re-enabled.**

**The IP NAT and IPsec Policy Agent features must be explicitly turned off before TCP Chimney can function.**

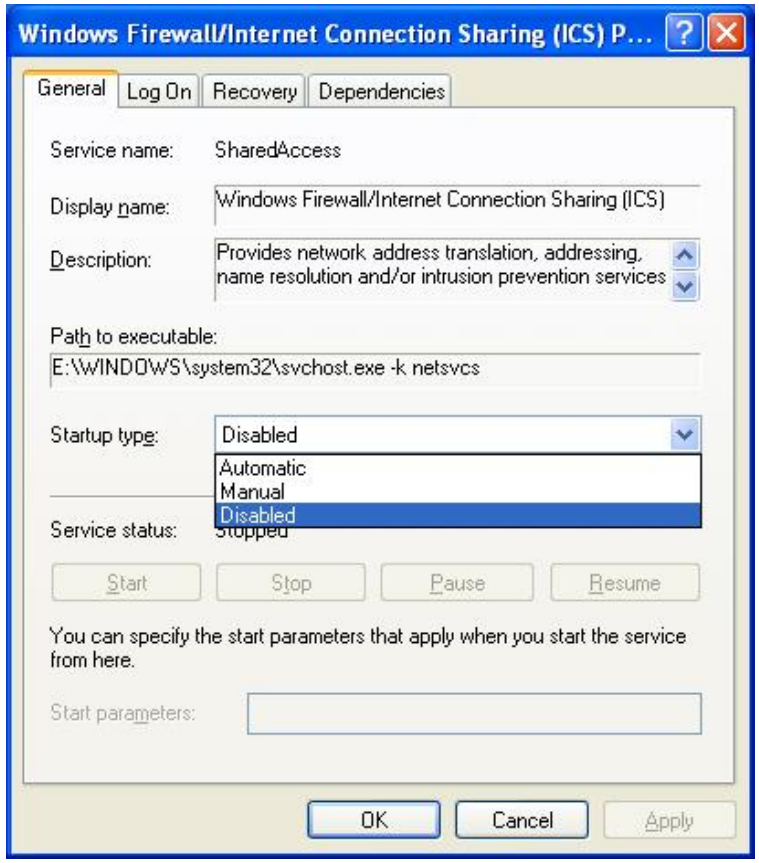
To disable this feature, use the following procedure:

1. Start Computer Management - from the **Start** menu, right click **My Computer** and select **Manage**.
2. Under Services and Applications, click on **Services**. On the right side, scroll down and double click on **Windows Firewall/Internet Connection Sharing (ICS)**, select **Disabled**.






3. Under Start type: select **Disabled**.




4. Click **OK**.

## 3.5 Disabling TCP Offload on Select Interfaces

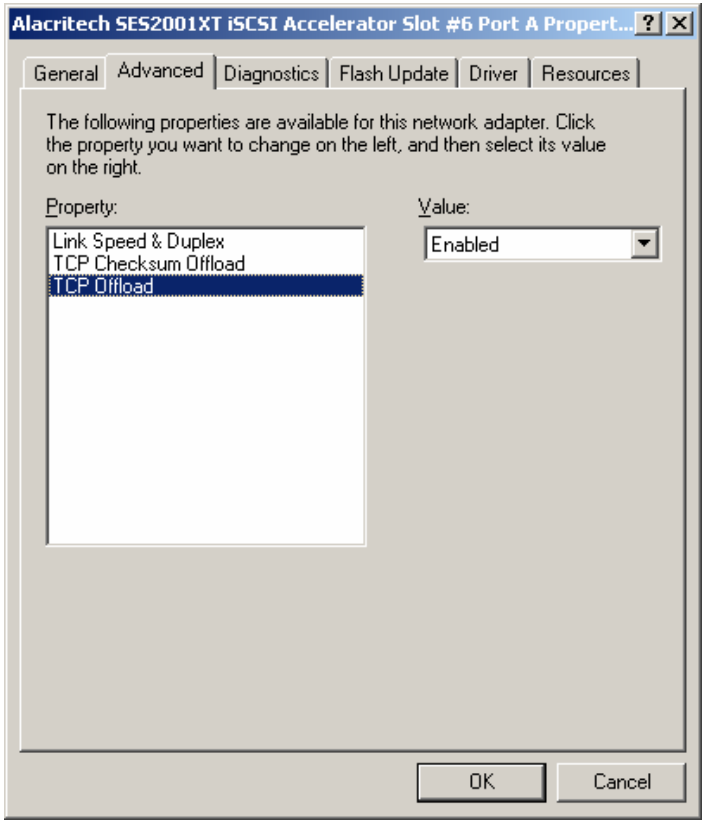
In certain environments, such as networks with routing loops, it may be necessary to disable the TCP Offload feature on the Accelerators in your system. To disable this feature, use the following procedure:

**Note: Disabling TCP Offload will disable the performance benefits of the Accelerator on that interface. This should be done only as required.**

5. From the **Start** menu, open the **Network & Dial-up Connections** folder located under the **Settings** menu.
6. Double-click the LAN connection of the interface you wish to disable TCP offload.
7. Click the **Properties** button.
8. Select the **Advanced** tab.



9. Click **TCP Offload** and select **Disabled.** Click **OK**.

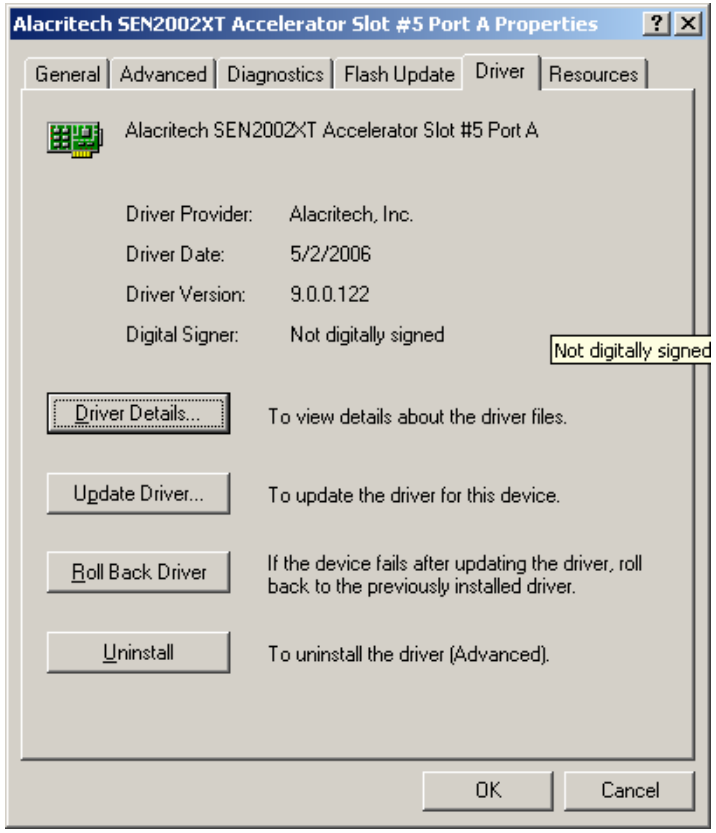



10. Restart your computer.

## 3.6 Managing Drivers

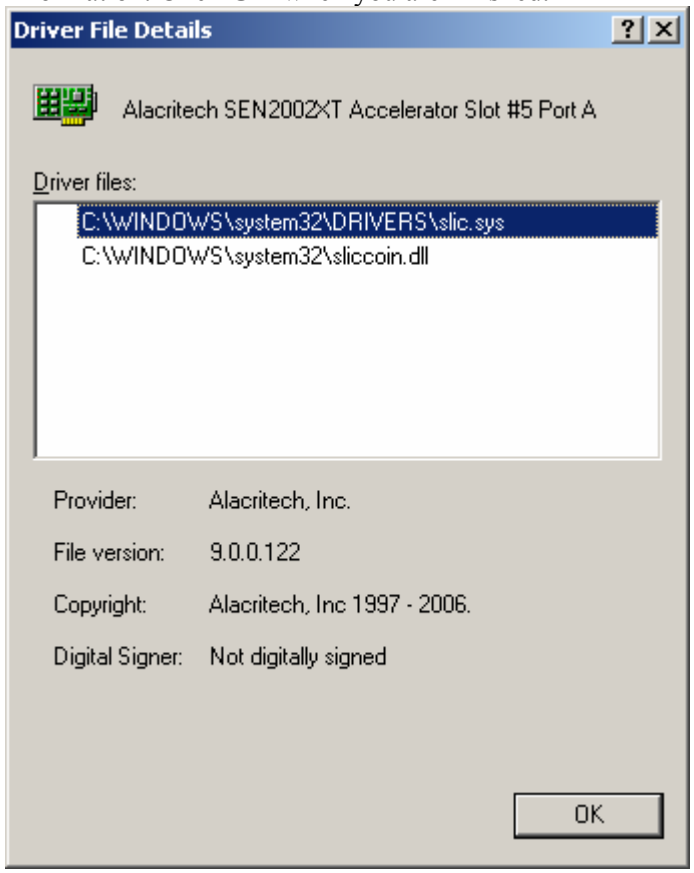
Drivers for Alacritech Accelerators can be managed through the device manager.

1. From the **Start** menu, open the **Network & Dial-up Connections** folder located under the **Settings** menu.
2. Double-click the LAN connection of the interface you wish to disable TCP offload.
3. Click the **Properties** button.
4. Select the **Drivers** tab.






5. Click **Driver Details** to obtain additional driver information. Click **OK** when you are finished.



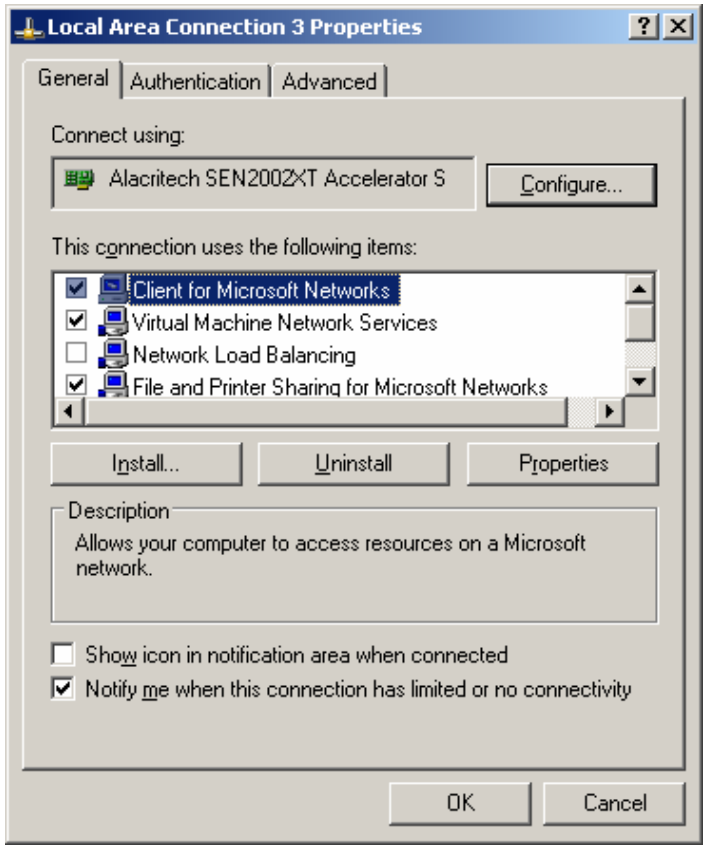

6. The **Update** Driver, **Roll Back Driver** and **Uninstall** buttons may be used for their respective operations. Alacritech expects to provide updates for Scalable Networking Pack drivers through Windows Update.

## 3.7 Configuring Advanced Properties

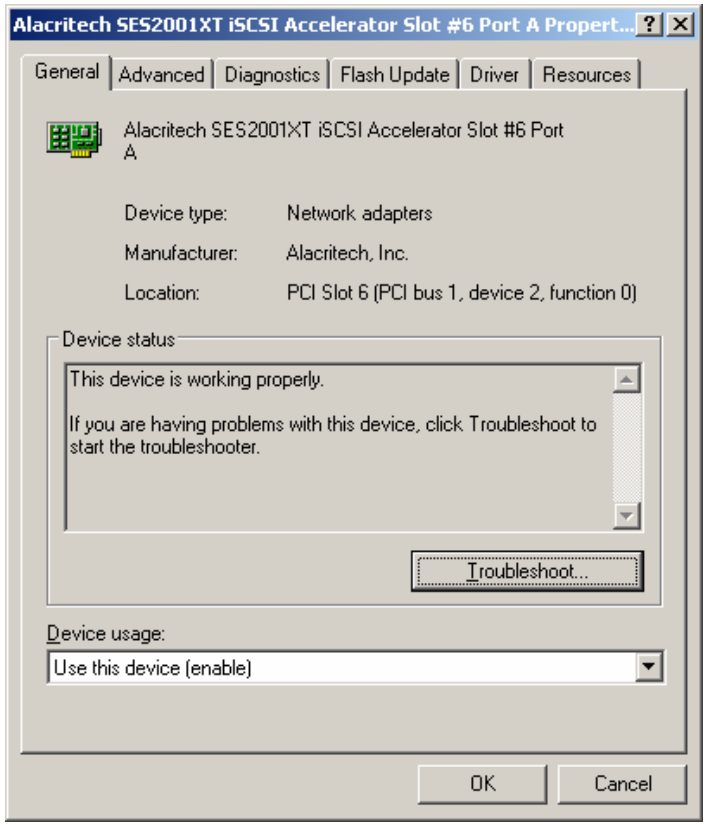
Alacritech Accelerators support the advanced features TCP Checksum Offload and TCP Offload.

Perform the following steps to access the advanced configuration properties for an Alacritech Accelerator

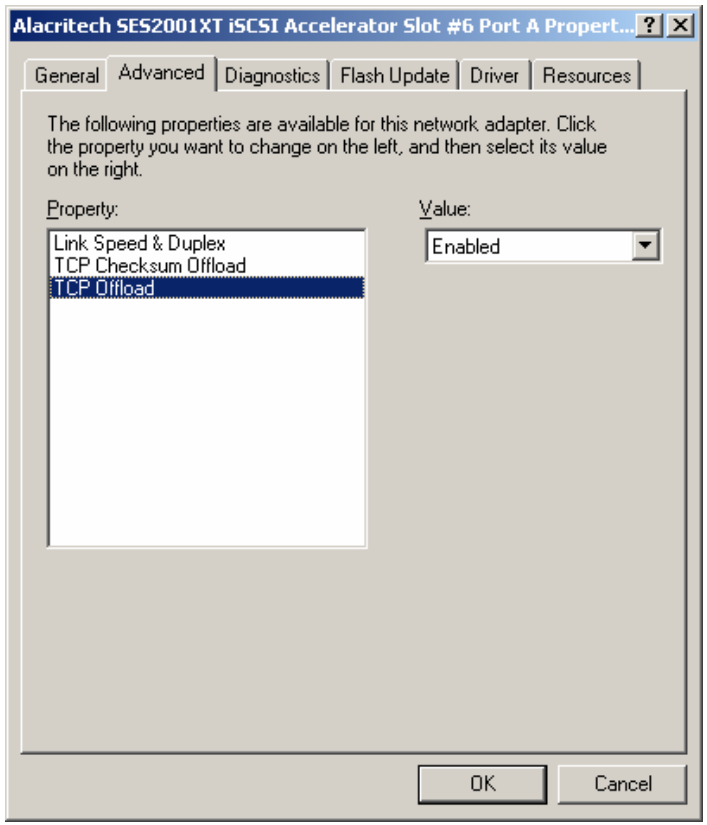
1. From the **Start** menu, open the **Network & Dial-up Connections** folder located under the **Settings** menu.
2. Double-click the LAN connection of the interface you wish to disable TCP offload.




3. Click the **Configure** button. The Accelerator **Properties** dialog box will appear:



4. Select the **Advanced** tab to access the properties that are available for the selected Accelerator:




The following settings are available under the **Advanced** tab:

**Link Speed & Duplex** – This option allows for the direct setting of the data transmission rate. The default for this setting is Auto Detect. The available options for this setting are shown in the following table:



| Media | Setting | Description |
|---|---|---|
| Copper | 10Mbps Full Duplex | Sets data rate to a maximum of 10 megabits per second bi-directionally |
| | 10Mbps Half Duplex | Sets data rate to a maximum of 10 megabits per second unidirectionally |
| | 100Mbps Full Duplex | Sets data rate to a maximum of 100 megabits per second bi-directionally |
| | 100Mbps Half Duplex | Sets data transmission rate to a maximum of 100 megabits per second unidirectionally |
| | 1000 Mbps Full Duplex | Sets data transmission rate to a maximum of 1000 megabits per second bi-directionally |
| | **Auto Detect** | The controller will detect the optimum data transmission rate for a given connection |
| Fiber | 1000 Mbps Full Duplex | Sets data transmission rate to a maximum of 1000 megabits per second bi-directionally |
| | **Auto Detect** | The controller will detect the optimum data transmission rate for a given connection. It will negotiate 1000 Mbps Full Duplex |

The default value for Link Speed & Duplex is **Auto Detect**.

**TCP Checksum Offload** – The TCP Checksum Offload option will allow the Accelerator to offload the TCP checksum for TCP data transmitted and received when the Accelerator has the **TCP Offload** option disabled. Because Alacritech's SLIC Technology offloads

the checksum automatically, this option is unused except when TCP traffic is not offloaded.

The default value for TCP Checksum Offload is **Enabled**.

**TCP Offload** –TCP Offload allows an entire TCP transaction, potentially spanning many frames, to be sent by or received by the Accelerator as a single segment, using only one interrupt. Conversely, with TCP Offload disabled, the TCP stack running on the system CPU will do all TCP protocol processing and each frame is transmitted or received individually.

The default value for TCP Offload is **Enabled**.

# 4 Troubleshooting and Support

## 4.1 Alacritech Automated Customer Support

You can reach Alacritech's automated support service 24 hours a day, every day. The service contains the most up-to-date information about Alacritech products. You can access the most current drivers, installation instructions, troubleshooting information, and general product information.

Support: http://www.alacritech.com/html/techsupport.html

Corporate: http://www.alacritech.com/

## 4.2 README Files on CD-ROM

For more information about known issues, open bugs or other integration problems with Microsoft Windows drivers, see the readme.html documentation and RelNotes.txt release notes. To view the files, go to the **Alacritech Driver Installation CD** and open it with any web browser or text editor.

## 4.3 Troubleshooting Overview

This chapter describes specific problems with installation or use that may arise and their solutions. It covers the following issues:

- Installation Problems
- Event Log Errors
- Connectivity Problems
- Performance Problems
- Miscellaneous Issues About SLIC Technology



## 4.4 Installation Problems

This section covers errors and problems surrounding installation only. For other problems, please see the other sections in this chapter.

| Problem | Solution |
|---|---|
| TCP Offload does not work | TCP Chimney offload will not work with the following features:<br>•Windows Firewall (Windows XP enabled by Default)<br>•Internet Protocol security (IPsec)<br>•Internet Protocol Network Address Translation (IPNAT)<br>•Third-party firewalls<br>•NDIS 5.1 intermediate drivers<br>If any one of these features is turned on, TCP Chimney offload will not work regardless of the registry settings. See Chapter 3 for instructions on disabling these features. |

## 4.5 Event Log Errors

This section covers entries written to the Event Log. You can view the Event Log from the Event Viewer located in the Administrative Tools folder on the Start Menu, located under Programs.

| Problem | Solution |
|---|---|
| Event Log reports *"SLIC<x> Has determined that the adapter is not functioning properly"* | • Run Diagnostics from NCPA. See the procedure in Chapter 3.<br>• Contact Alacritech technical support for assistance. This is probably the result of a malfunctioning adapter. |



## 4.6 Connectivity Problems

This section covers problems with network connectivity.

| Problem | Solution |
|---|---|
| There is no connectivity at all with other computers on the network.<br><br>Pinging does not work. | • Make sure that the cables are attached securely at both RJ-45 connections (adapter and switch) and that the network cable is otherwise functional.<br>• Make sure that the network cables are plugged into the correct port of the adapter. The driver will list the slot and port for the interface.<br>• Check the LED indicators on the adapter. Each port has LEDs for link/link speed and activity. These lights help indicate if there is a problem with the adapter, switch or cable. Refer to the "LED Function Indicators" chart below. |

Alacritech SEN2002XT, SEN2001XT, SES2002XT and SES2001XT Accelerator LED Function Indicators

| LED | Indication | Meaning |
|---|---|---|
| ACT/LNK | Green On | The port is connected to a valid link partner. |
| | Green Flashing | The Accelerator is sending or receiving network data. |
| | Off | The Accelerator is not connected to a valid link partner. |
| 10/100/1000 | Off | A 10 Mbps link has been established (if the ACT/LNK LED is on or flashing). |
| | Green | A 100 Mbps link has been established. |
| | Yellow | A 1000 Mbps link has been established. |



### 4.6.1 Alacritech SEN2002XF, SEN2001XF, SES2002XF and SES2001XF Accelerator LED Function Indicators

| LED | Indication | Meaning |
|---|---|---|
| LNK | Green On | The Accelerator and the switch are receiving power; the fiber optic cable connection between them is good, and a 1000 Mbps link has been established. |
| | Off | Either the Accelerator or the switch (or both) is not receiving power, or the fiber optic cable connection between them is faulty |
| ACT | Yellow Flashing | The Accelerator is sending or receiving network data. |
| | Off | The Accelerator is not sending or receiving network data. |

# Appendix A Network Software License Agreement and Warranty

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